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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,157

10/18/2006

Gerd Kleideiter

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24972 7590 04/21/2009
FULBRIGHT & JAWORSKI, LLP
666 FIFTH AVE
NEW YORK, NY 10103-3198

EXAMINER

XU, LING X

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

04/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,157	Applicant(s) KLEIDEITER ET AL.	
	Examiner Ling Xu	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/3/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 25-27 and 29-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Coustet et al. (WO-2002/048065, its US equivalent, US 2005/0123772, is used as English translation).

Regarding claims 25-27, 29, 33, and 35, Coustet discloses a coated article comprising at least one transparent glass substrate provided with a stack of thin layers having an alternation of n functional layers and of $n+1$ coatings composed of one or more layers made of a dielectric, so that each functional layer is placed between two coatings. Furthermore, at least one layer absorbent is inserted between two layers of dielectric of at least one of the said coatings. The absorbent layers may be NiCr nitride (NiCrN) or chromium nitride (CrN) layers (translation page 1, [0017]). The dielectric layers may be silicon nitride layers (page 2, [0019]-[0020]).

Coustet also discloses that at least one layer of an oxide (functional equivalent to the claimed dielectric oxide layer) of tin oxide, titanium oxide, silicon oxide, niobium oxide which is between the absorbing layer and the dielectric layer (translation page 2, [0023]).

It should be noted that newly added claims 25-35 recite “a coating for a substrate comprising a transparent Si₃N₄ or SiN_x layer directly on the substrate.” The claimed

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subject matter is a coating. The recitation of "for a substrate" places no positive limitations on the claimed coating it merely indicates the intended use of the coating. The claimed coating does not include the substrate as part of its structure.

Regarding claims 30-32, Coustet discloses that the thickness of silicon nitride is 21.5-31 nm and the thickness of dielectric oxide is 10 nm (translation page 3, [0043]). The absorbing layer has a thickness of less than or equal to 7nm (translation page 2, [0018]),

Regarding claim 34, Coustet discloses that the substrate can be a synthetic material (translation page 2, [0030]).

Claim Rejections - 35 USC § 103

2. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coustet et al. as applied to claim 25 above, and further in view of Lingle et al. (US 2002/0064662).

As stated above, Coustet disclose the substrate coating structure comprising the same structure as recited in claim 25.

Coustet does not discloses that the substrate coating comprising a SiN_x layer with x smaller than 4/3 as recited in claim 28.

Lingle teaches that a non-stoichiometric SixNy layer can be used as a dielectric layer in a coated article to reduce haze and/or improve mechanical durability (page 4, [0075]). The ratio of x/y may be from about 0.85 to 1.2.

Accordingly, it would have been obvious to one of ordinary skill in the art to use non-stoichiometric silicon nitride as the dielectric layer in Coustet's coated article in order to reduce haze and/or improve mechanical durability of the coated article.

Response to Arguments

3. Applicant's arguments filed 4/3/2009 have been fully considered but they are not persuasive.

Applicant argues that Coustet does not disclose that a further layer of Si₃N₄, is disposed on the layer, which is disposed directly on the semimetallic layer.

As stated above and in the prior Office action, Coustet discloses a coated article comprising at least one absorbent layer inserted between two layers of dielectric of at least one of the coatings. The absorbent layers may be NiCr nitride (NiCrN) or chromium nitride (CrN) layers (translation page 1, [0017]). The dielectric layers may be silicon nitride layers (page 2, [0019]-[0020]). Coustet also discloses that at least one layer of an oxide (functional equivalent to the claimed dielectric oxide layer) of tin oxide, titanium oxide, silicon oxide, niobium oxide is between the absorbing layer and the dielectric layer (translation page 2, [0023]). Accordingly, Coustet discloses a layered structure of silicon nitride layer / oxide layer (e.g. tin oxide, titanium oxide, silicon oxide, niobium oxide) / CrN or NCrN layer / silicon nitride layer. The layered structure anticipates the layered structure as claimed in the present application.

Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling Xu whose telephone number is 571-272-7414. The examiner can normally be reached on 8:00 am- 4:30 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ling Xu
Primary Examiner
Art Unit 1794

/Ling Xu/
Primary Examiner, Art Unit 1794

Lx
April 20, 2009